

REMARKS

This Amendment is responsive to the Office Action dated May 7, 2009. In this Amendment, claims 17-22, 29-46, 50 and 53-56 are canceled without prejudice or disclaimer, claims 1, 6, 11, 23, 48, 49, 51 and 52 have been amended and claim 57 is newly added. These amendments add no new matter. Support for these amendments may be found variously throughout the Specification. Claims 1-16, 23-28, 47-49, 51 and 52 remain pending in the application. Reconsideration and allowance of the pending claims are respectfully requested.

Claims 1 and 11 are objected to because of informalities. The claims are amended to obviate the objection. Withdrawal of the objection is respectfully requested.

Claims 1-5, 11-13, 15-22, 29-38, 39, 40, 43, 44 and 48-56 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,517,399 to Ito et al. ("Ito") in view of U.S. Patent Publication No. 2004/0075378 to Niibori et al. ("Niibori"). The rejection is respectfully traversed.

Ito teaches a method of manufacturing a spacer interposed between a first substrate having an image-forming member and a second substrate having an electron-emitting device. The method discloses the steps of: (A) preparing a glass preform; (B) stretching part of the glass preform while heating the glass preform by a heater; (C) cutting the stretched glass preform into a desired length; (D) applying a conductive material-dispersed or conductive material-dissolved liquid to an end portion of a spacer substrate formed by cutting the stretched glass preform into a desired length; and (E) heating the liquid applied to the spacer substrate to form an electrode at the end portion of the spacer substrate. The stretching step has the step of feeding the glass preform at a first velocity toward the heater and stretching the glass preform heated by the heater in a direction away from the heater at a second velocity v_2 different from the first velocity such that the first velocity is less than the second velocity.

Niibori teaches an image display apparatus that includes a first substrate provided with a plurality of electron emitting elements in a vacuum container, a second substrate positioned

opposite to said first substrate in said vacuum container with said second substrate being irradiated with electrons emitted from said electron emitting elements, at least one spacer disposed on either one of said first and second substrates to provide an atmospheric pressure resistant structure of said vacuum container with said spacer being interposed between said first and second substrates and having a longitudinal direction in a direction substantially perpendicular to an opposing direction of said first and second substrates and a lateral wall positioned inside an external periphery of at least either one of said first and second substrates to provide a sealed structure of said vacuum container. A first support member for supporting said spacer is provided outside an image display area which is formed between an area of said electron emitting elements of said first substrate and an electron-irradiated area of said second substrate while a second support member is provided outside said image display area of either one of said first and second substrates. The first support member and said second support member are joined together.

Claim 1, as amended, is directed to a flat-type display that includes a first panel, a second panel, a spacer, a first electrode member, a second electrode member, a first low-melting-point metal layer, a second low-melting-point metal layer, a first conductive material layer and a second conductive material layer. Claim 1 recites that the first panel and the second panel are bonded to each other in their circumferential portions and have a space between the first panel and the second panel with the space being in a vacuum state. Claim 1 also recites that the spacer extends, as viewed in cross-section, longitudinally in the space between the first panel and the second panel to terminate in a first end spacer surface and an opposite second end spacer surface and laterally between a pair of spaced-apart spacer side walls to define a thickness therebetween. Also, claim 1 recites that the first electrode member extends across and is connected to one of the first panel and the second panel with the first electrode member, as viewed in cross-section, formed with a recess having a pair of facially-opposing recess side walls and a recess bottom wall interconnecting the pair of recess side walls. Further, claim 1 recites that the second electrode member extends across and is connected to a remaining one of the first panel and the second panel. Claim 1 recites that each one of the first and second low-melting-point metal layers is fabricated from an electrically-conductive material having a low melting point and each one of the first and second conductive material layers is fabricated from an electrically-conductive material. Additionally, claim 1 recites

that the spacer electrically connects the first and second electrodes. Furthermore, claim 1 recites that a first end portion of the spacer is disposed in the recess with the first conductive material layer disposed on the first end spacer surface and the first low-melting-point metal layer being in contact with and disposed between the first conductive material layer and the recess bottom wall and each one of the pair of recess side walls being in contact with the first conductive material layer and the first low-melting-point metal layer while the pair of spacer side walls at the first end portion of the spacer being spaced apart from the pair of recess side walls. And, claim 1 recites that the second conductive material layer is disposed on the second end spacer surface and the second low-melting-point metal layer is in contact with and disposed between the second conductive material layer and second electrode member.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claim 1 as amended. Specifically, it is respectfully submitted that the applied art, alone or in combination, fails to teach or suggest that a first end portion of the spacer is disposed in the recess with the first conductive material layer disposed on the first end spacer surface and the first low-melting-point metal layer being in contact with and disposed between the first conductive material layer and the recess bottom wall and each one of the pair of recess side walls being in contact with the first conductive material layer and the first low-melting-point metal layer while the pair of spacer side walls at the first end portion of the spacer being spaced apart from the pair of recess side walls.

Thus, it is respectfully submitted that one of ordinary skill in the art could not combine the features of the applied art to arrive at the claimed invention because the applied art is devoid of all the features of the claimed invention. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Claim 11, amended, is directed to a method for manufacturing a flat-type display as recited in claim 1. Claim 11 recites the method comprising the steps of:

positioning a first end portion of the spacer in the recess with the first conductive material layer disposed on the first end spacer surface and the first low-melting-point metal layer being in

contact with and disposed between the first conductive material layer and the recess bottom wall and each one of the pair of recess side walls being in contact with the first conductive material layer and the first low-melting-point metal layer while the pair of spacer side walls at the first end portion of the spacer being spaced apart from the pair of recess side walls;

positioning the second conductive material layer on the second end spacer surface; and

positioning the second low-melting-point metal layer in contact with and between the second conductive material layer and second electrode member.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claim 11 as amended. Specifically, it is respectfully submitted that the applied art, alone or in combination, fails to teach or suggest the three positioning steps as discussed immediately above. Thus, it is respectfully submitted that one of ordinary skill in the art could not combine the features of the applied art to arrive at the claimed invention because the applied art is devoid of all the features of the claimed invention. As a result, it is respectfully submitted that claim 11 is allowable over the applied art.

Claims 2-5, 48 and 49 depend from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite.

Claims 12, 13, 15, 16, 25, 51 and 52 depend from claim 11 and includes all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 11 is allowable as well as for the features they recite.

Claims 17-22, 29-40, 43, 44, 50 and 53-56 are canceled and, as a result, the rejection as applied thereto is now moot.

Withdrawal of the rejection is respectfully requested.

Claims 6-10, 23, 24, 26-28, 41, 42 and 44-46 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito and Niibori as applied to claims 1, 11 and 29 and further in view of Hsiao et al. (U.S. Patent Publication No. 2002/0096992). The rejection is respectfully traversed.

Hsiao teaches a processing method and structure for a packaging technique of a large size field emission display. A large size field emission display includes an indium-tin oxides (ITO) conducting glass substrate, which is covered by the first screen mask and the second screen mask defined to a BM layer area, a multi-phosphor layer area and a hollow area. Each area is coated to form an Al layer, which was formed an AlO_x layer through a phosphor sintering process. The spacer was fixed in a hollow area of an AlO_x layer through an anodic assembling technique. The next plate was fixed on the spacer to accomplish an aligner process.

As discussed above, claims 1 and 11 are allowable over the combination of over Ito and Niibori. Hsiao fails to cure the deficiencies of this combination of references. Thus, claims 1 and 11 are allowable over Ito, Niibori and Hsiao. As discussed above, claim 29 is canceled.

Claims 6-10 depend from claim 1 and include all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite.

Claims 23, 24 and 26-28 depend from claim 11 and include all of the features of claim 11. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 11 is allowable as well as for the features they recite.

Claims 29, 41, 42 and 44-46 are canceled and, as a result, the rejection as applied thereto is now moot.

Withdrawal of the rejection is respectfully requested.

Claim 47 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito and Niibori as applied to claim 1 and further in view of U.S. Patent Publication No. 2003/01900722 to

Toyota et al. ("Toyota"). This rejection is traversed at least for the following reasons.

Toyota teaches a cold cathode field emission device.

As discussed above, claim 1 is allowable over the combination of over Ito and Niibori. Toyota fails to cure the deficiencies of this combination of references. Thus, claim 1 is allowable over Ito, Niibori and Toyota.

Claim 47 depends from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that the dependent claim is allowable at least for the reason claim 1 is allowable as well as for the features it recites.

Withdrawal of the rejection is respectfully requested.

CONCLUSION

It is respectfully submitted that the pending claims are believed to be in condition for allowance over the prior art of record. Therefore, this Amendment is believed to be a complete response to the outstanding Office Action. Further, Applicant asserts that there are also reasons other than those set forth above why the pending claims are patentable. Applicant hereby reserves the right to set forth further arguments and remarks supporting the patentability of their claims, including the separate patentability of the dependent claims not explicitly addressed herein, in future papers.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicant's representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

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Respectfully submitted,

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